BRUHAT BANGALORE MAHANAGARA PALIKE

MEASUREMENT SHEET

RA 1ST AND FINAL BILL

Name of work: Improvements and Asphalting to Roads at BSNL Road 2nd & 3rd Block HMT Layout and Surrounding areas in Ward No. 09

Estimated Cost : Rs. 40.00 Lakhs

Job Code: 009-20-000083

Head of Account : P-3726 Zonal PublicWorks - POW Works

Name of Agency: M/s. K.R Constructions, Prop: Mahesh. C, 286, 7th B Cross, Jakkur Layout, Bangalore - 560064.

Work order No: BBMP/EE/BTP/WO/157/2020-21 Dated: 10.12.2020.

Measurements Recarded on : 24-06-2021

Sl No.	Description	No.	L	B1	B2.	Av.,B	D	Qty	Rate / Unit	Amount
1	Earthwork excavation by manual means in ordinary soil involving an average horizontal throw upto 2 meters and an average lift upto 0.5 m, excavated surface leveled and sides neatly dressed, the disposed earth to be leveled neatly after breaking of clods complete as per specifications.								Cum	
	Qty as per Premeasurement vide E-MB Page No. 01 to 03 is =							**365.77**	222.10	**81238.00**
2	Removing and refixing stone slabs of drains and pointing in CM (1:3) etc complete as per specification								Sqm	
	Qty as per Premeasurement vide E-MB Page No. 04 to 05 is =							**1482.20**	101.48	**150414.00**
3	Providing granite slabs of selected quality roughly dressed having a size of 7.5 cms thick and fixed in cement mortar (1:6) including fixing curing ete., complete								Sqm	
	HMT Layout 3rd Block 9th Main									
	E/S									
	From Durga Temple Road to 6th Cross	1	10.20				1.35	13.77		
		1	10.50				1.35	14.18		
		1	5.60				1.35	7.56		
		1	5.60				1.35	7.56		
		1	8.50				1.35	11.48		
		1	8.90				1.35	12.02		
		1	5.50				1.35	7.43		
		1	6.60				1.35	8.91		
		1	4.60				1.35	6.21		
		1	8.50				1.35	11.48		
		1	6.50				1.35	8.78		
	From 6th Cross to Sommanna Garden Main Road									
		1	5.60				1.35	7.56		
		1	4.80				1.35	6.48		
		1	9.50				1.35	12.83		
		1	8.20				1.35	11.07		
		1	7.60				1.35	10.26		
		1	6.40				1.35	8.64		
		1	9.50				1.35	12.83		
		1	7.60				1.35	10.26		
		1	7.20				1.35	9.72		

C & FC

Assistant Executive Engineer, Byrarayanapura Sub Division, BBMP, Bangalore-97

198.99

Sl No.	Description	No.	L	B1	B2.	Av.,B	D	Qty	Rate / Unit	Amount
		1	6.80				1.35	9.18	1198-91	
		1	7.20				1.35	9.72		
	W/S									
	From Durga Temple Road to 6th Cross	1	12.30				1.35	16.61		
		1	9.50				1.35	12.83		
		1	7.50				1.35	10.13		
		1	2.60				1.35	3.51		
		1	8.90				1.35	12.02		
		1	9.40				1.35	12.69		
		1	9.40				1.35	12.69		
		1	5.60				1.35	7.56		
		1	7.80				1.35	10.53		
		1	9.80				1.35	13.23		
		1	8.60				1.35	11.61		
	From 6th Cross to Sommanna Garden Main Road									
		1	9.50				1.35	12.83		
		1	6.50				1.35	8.78		
		1	1.20				1.35	1.62		
		1	6.30				1.35	8.51		
		1	5.30				1.35	7.16		
		1	5.20				1.35	7.02		
					Total Qty =			387.18		
					Qty Limited to =			386.75	676.56	261660.00

Assistant Engineer
Ward No. 09

Assistant Executive Engineer
Vidayranyapura Sub Division

Sl No.	Description	No.	L	B1	B2.	Av.,B	D	Qty	Rate / Unit	Amount
	Measurements Recarded on :	24-06-2021								
4	Providing and constructing load bearing wall with solid concrete blocks of size 400x150x200 mm having block density not lessthan 1800 kg/m3 and having a minimum average compressive strength 4.00 N/mm2 confirming to IS 2185 (Part) : 2005 and constructed with CM 1:4 , as per IS 2572:2005 including cost of all materials, labour charegs, scaffolding, curing complete as per specifications.								Sqm	
	HMT Layout 3rd Block 9th Main									
	E/S									
	From Durga Temple Road to 6th Cross	2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	13.00				0.40	10.40		
	From 6th Cross to Sommanna Garden Main Road									
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	14.00				0.40	11.20		
	W/S									
	From Durga Temple Road to 6th Cross	2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	18.00				0.40	14.40		
	From 6th Cross to Sommanna Garden Main Road									
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		

C/F.C. 30/06

C/F.C. 30/06

492.00

Assistant Executive Engineer
Jayanagar Apura Sub Division
BBMP, Bangalore - 97

Sl No.	Description	No.	L	B1	B2.	Av.,B	D	Qty	Rate / Unit	Amount
		2	15.00				0.40	12.00	1,92.00	
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	15.00				0.40	12.00		
		2	14.00				0.40	11.20		
	Road Opening Deduction	4x2	6.00				0.40	19.20		
					Total Qty =			618.40		
					Qty Limited to =			612.80	893.06	547261.00

Assistant Executive Engineer, Vidyaranyapura Sub Division, BBMP, Bangalore - 97

Assistant Engineer
Ward No. 09

Assistant Executive Engineer
Vidayranyapura Sub Division

Sl No.	Description	No.	L	B1	B2.	Av.,B	D	Qty	Rate / Unit	Amount
	Measurements Recarded on :	24.06.2021								
5	Providing and laying in position plain cement concrete of mix 1:2:4 with cement @ 240kgs, with 20mm and down size graded granite metal coarse aggregates @ 0.69 cum and fine aggregtes @ 0.459cum, machine mixed, concrete laid in layers not exceeding 15 cms. thick, well compacted, for coping. Including cost of all materials, labour, HOM of machinery, curing complete as per specifications.								Cum	
	Bed Concrete									
	HMT Layout 3rd Block 9th Main									
	E/S									
	From Durga Temple Road to 6th Cross	1	8.00			0.45	0.10	0.36		
		1	6.00			0.45	0.10	0.27		
		1	10.80			0.45	0.10	0.49		
		1	5.50			0.45	0.10	0.25		
		1	6.20			0.45	0.10	0.28		
		1	11.60			0.45	0.10	0.52		
		1	15.20			0.45	0.10	0.68		
		1	6.10			0.45	0.10	0.27		
		1	22.10			0.45	0.10	0.99		
		1	6.20			0.45	0.10	0.28		
		1	6.10			0.45	0.10	0.27		
		1	5.50			0.45	0.10	0.25		
		1	4.80			0.45	0.10	0.22		
		1	4.90			0.45	0.10	0.22		
	From 6th Cross to Sommanna Garden Main Road									
		1	6.20			0.45	0.10	0.28		
		1	5.90			0.45	0.10	0.27		
		1	10.60			0.45	0.10	0.48		
		1	12.80			0.45	0.10	0.58		
		1	12.00			0.45	0.10	0.54		
		1	5.00			0.45	0.10	0.23		
		1	11.60			0.45	0.10	0.52		
		1	4.50			0.45	0.10	0.20		
		1	5.00			0.45	0.10	0.23		
		1	4.80			0.45	0.10	0.22		
		1	9.50			0.45	0.10	0.43		
	W/S									
	From Durga Temple Road to 6th Cross	1	6.50			0.45	0.10	0.29		
		1	9.50			0.45	0.10	0.43		
		1	4.50			0.45	0.10	0.20		
		1	10.90			0.45	0.10	0.49		
		1	15.60			0.45	0.10	0.70		
		1	5.80			0.45	0.10	0.26		
		1	6.20			0.45	0.10	0.28		
		1	11.50			0.45	0.10	0.52		
		1	4.80			0.45	0.10	0.22		
		1	10.50			0.45	0.10	0.47		
		1	15.80			0.45	0.10	0.71		
		1	5.50			0.45	0.10	0.25		
		1	14.30			0.45	0.10	0.64		
		1	5.50			0.45	0.10	0.25		
	From 6th Cross to Sommanna Garden Main Road									
		1	3.80			0.45	0.10	0.17		

CAFE Checked 24/6

Assistant Executive Engineer
Rajarajeshwarapura Sub Division
BBMP, Bangalore-97

15.19

Sl No.	Description	No.	L	B1	B2.	Av.,B	D	Qty	Rate / Unit	Amount
		1	4.90			0.45	0.10	0.22	15.19	
		1	12.50			0.45	0.10	0.56		
		1	6.40			0.45	0.10	0.29		
		1	10.50			0.45	0.10	0.47		
		1	12.60			0.45	0.10	0.57		
		1	12.00			0.45	0.10	0.54		
		1	6.20			0.45	0.10	0.28		
		1	10.90			0.45	0.10	0.49		
		1	5.50			0.45	0.10	0.25		
		1	9.50			0.45	0.10	0.43		
	Coping Concrete									
	HMT Layout 3rd Block 9th Main									
	E/S									
	From Durga Temple Road to 6th Cross	2	15.00			0.20	0.10	0.60		

Sl No.	Description	No.	L	B1	B2.	Av.,B	D	Qty	Rate / Unit	Amount
		2	15.00			0.20	0.10	0.60	41.37	
		2	18.00			0.20	0.10	0.72		
	From 6th Cross to Sommanna Garden Main Road									
		2	15.00			0.20	0.10	0.60		
		2	15.00			0.20	0.10	0.60		
		2	15.00			0.20	0.10	0.60		
		2	15.00			0.20	0.10	0.60		
		2	15.00			0.20	0.10	0.60		
		2	15.00			0.20	0.10	0.60		
		2	15.00			0.20	0.10	0.60		
		2	15.00			0.20	0.10	0.60		
		2	15.00			0.20	0.10	0.60		
		2	15.00			0.20	0.10	0.60		
		2	14.00			0.20	0.10	0.56		
	Road Opening Deduction	4	6.00			0.20	0.10	-0.48		
					Total Qty =			48.77		
					Qty Limited to =			48.64	5106.06	248359.00

Assistant Engineer
Ward No. 09

Assistant Executive Engineer
Vidayranyapura Sub Division

Assistant Executive Engineer
Vidyaranyapura Sub Division
BBMP, Bangalore

Sl No.	ion	No.	L	B1	B2.	Av.,B	D	Qty	Rate / Unit	Amount
	Measure: n :	24-06-2021								
6	Providing f selected quality roughly dressed having a size of 10 cms thick and fixed in cement mortar (1:6) including fixing curing ete., complete								Sqm	
	B S Slab Covering									
	HMT Layout 3rd Block 9th Main W/S									
		1	13.00			1.00		13.00		
		1	6.60			1.00		6.60		
		1	2.00			1.00		2.00		
		1	4.60			1.00		4.60		
		1	7.80			1.30		10.14		
		1	8.90			1.50		13.35		
		1	8.90			1.20		10.68		
		1	8.90			1.30		11.57		
		1	8.90			1.20		10.68		
		1	5.20			1.30		6.76		
		1	14.00			1.30		18.20		
		1	8.00			1.30		10.40		
		1	3.90			1.30		5.07		
		1	3.30			1.30		4.29		
		1	3.00			1.30		3.90		
		1	14.00			1.20		16.80		
		1	4.00			1.20		4.80		
		1	15.00			1.30		19.50		
		1	11.50			1.30		14.95		
		1	8.00			1.20		9.60		
		1	8.00			1.20		9.60		
		1	13.40			1.20		16.08		
		1	9.00			1.20		10.80		
		1	13.00			1.20		15.60		
		1	9.00			1.20		10.80		
		1	3.00			1.20		3.60		
		1	8.00			1.30		10.40		
		1	9.00			1.30		11.70		
		1	11.00			2.20		24.20		
		1	15.00			1.50		22.50		
		1	1.70			1.70		2.89		
		1	7.50			1.00		7.50		
		1	9.10			1.30		11.83		
		1	4.30			1.65		7.10		
		Total Qty =						**361.49**		
		Qty Limited to =						**360.00**	881.46	**317326.00**

Assistant Engineer
Ward No. 09

Assistant Executive Engineer
Vidayranyapura Sub Division

Sl No.	Description	No.	L	B1	B2.	Av.,B	D	Qty	Rate / Unit	Amount
	Measurements Recarded on :	24.06.2021								
7	KSRB 5-9 : Providing chamfering edges to stone slab 2.5 cms. wide as per specifications. (only chamfered length shall be recorded)								Mtrs	
		700	3.00					**2100.00**		
								2000.00	56.06	**112120.00**

Assistant Engineer
Ward No. 09

Assistant Executive Engineer
Vidayranyapura Sub Division

	Measurements Recarded on :									
8	Scarifying bituminous course 50mm to 75mm thick along with premix carpet / surface dressing by manual means without disturbing the base and stacking of the debris materials including cost of all labour charges complete as per specifications.								Sqm	
	Qty as per Premeasurement vide E-MB Page No. 06 to 07 is =							**911.54**	86.99	**79295.00**
9	Providing, laying, spreading and compacting crushed stone aggregates of granite / trap / basalt to wet mix macadam specifications including pre mixing the material with water at OMC in mechanical mix plant carriage of mixed method of tipper to site, laying in uniform layers with paver in sub-base/base course on well prepared surface and compacting with vibratory roller to achieve the desired density complete as per specifications.								Cum	
	Qty as per Premeasurement vide E-MB Page No. 08 to 09 is =							**227.89**	1824.77	**415847.00**
10	Providing and applying primer coat with S.S. bitumen emulsion on prepared surface of granular base such as WMM including cleaning of road surface and spraying primer at the rate of 0.60 kg / sqm using mechanical means complete as per specifications.								Sqm	
	Qty as per Premeasurement vide E-MB Page No. 10 to 11 is =							**911.54**	26.10	**23791.00**
11	Providing and laying **bituminous macadam** on prepared surface with crushed coarse aggregates as per design mix formula for base / binding course including loading of aggregates with F.E. loader, hot mixing of stone aggregates and bitumen in hot mix plant, transporting the mixd material in tipper to paver and laying mixed materials with paver finisher to the required level and grade, rolling by power roller to achieve the desired density, but excluding cost of primer / tack coat including lead, lift and cost of all materials, labour, HOM of machineries complete as per specifications. MORTH /Chapter 5 - using **40/60 TPH capacity H.M.P. with Mechanical paver Gr-II (50 mm to 75 mm) with 3.3 % VG-30 Bitumen**								Cum	
	Qty as per Premeasurement vide E-MB Page No. 12 to 13 is =							**45.59**	4890.53	**222959.00**
12	Cleaning the existing black topped surface with brooms, soft brushes and finally dusting with old gunny bags and / or compressed air to receive bituminous treatment including cost of all materials, labour, HOM of machineries complete as per specifications.								Sqm	
	Qty as per Premeasurement vide E-MB Page No. 14 is =							**2604.40**	4.83	**12579.00**
13	Providing and applying tack coat using 80/100 grade bitumen(VG10) on the prepared black topped surfaces at 2.5 kg per 10 sqm, heating bitumen in boiler fitted with spray set (excluding cleaning of road surface) including cost of all materials, labour, HOM of machineries complete as per specifications.								Sqm	
		Qty Vide Item No. 12						2604.40		
								2604.40	11.60	**30211.00**

Sl No.	Description	No.	L	B1	B2.	Av.,B	D	Qty	Rate / Unit	Amount
14	Providi... **ituminous concrete 40 mm thick** with hot mix plant, using crushed aggregates of specified grading, premixed with bituminous binder and filler, transporting the hot mix to work site, laying with a paver finisher to the required grade, level and alignment, rolling with smooth wheeled, vibratory and tandem rollers to achieve the desired compaction as per MORTH specification clause No. 500.9 complete in all respects complete as per specifications. MORTH Specification No. 509 - **using 40/60 TPH capacity H.M.P. with Mechanical Paver Gr-II (30 mm to 45 mm) with 6 % VG-30 Bitumen**								Cum	
	HMT Layout 3rd Block 9th Main									
	From Durga Temple Road to 6th Cross	1	15.00	7.90	8.50	8.20	0.040	4.92		
		1	15.00	8.50	7.90	8.20	0.040	4.92		
		1	15.00	7.90	8.20	8.05	0.040	4.83		
		1	15.00	8.20	6.10	7.15	0.040	4.29		
		1	15.00	6.10	8.60	7.35	0.040	4.41		
		1	15.00	8.60	8.20	8.40	0.040	5.04		
		1	15.00	8.20	8.10	8.15	0.040	4.89		
		1	15.00	8.10	8.60	8.35	0.040	5.01		
		1	15.00	8.60	6.90	7.75	0.040	4.65		
		1	15.00	6.90	8.70	7.80	0.040	4.68		
		1	15.00	8.70	6.60	7.65	0.040	4.59		
		1	15.00	6.60	8.80	7.70	0.040	4.62		
		1	15.00	8.80	6.50	7.65	0.040	4.59		
		1	18.00	6.50	9.70	8.10	0.040	5.83		
	From 6th Cross to Sommanna Garden Main Road									
		1	15.00	8.60	8.30	8.45	0.040	5.07		
		1	15.00	8.30	6.50	7.40	0.040	4.44		
		1	15.00	6.50	6.70	6.60	0.040	3.96		
		1	15.00	6.70	6.20	6.45	0.040	3.87		
		1	15.00	6.20	7.80	7.00	0.040	4.20		
		1	15.00	7.80	5.80	6.80	0.040	4.08		
		1	15.00	5.80	7.80	6.80	0.040	4.08		
		1	15.00	7.80	8.30	8.05	0.040	4.83		
		1	15.00	8.30	8.00	8.15	0.040	4.89		
		1	15.00	8.00	8.00	8.00	0.040	4.80		
		1	14.00	8.00	9.00	8.50	0.040	4.76		
						Total Qty =		**116.25**		
						Qty Limited to =		**104.18**	6921.16	**721046.00**

Assistant Engineer
Ward No. 09

Assistant Executive Engineer
Vidayranyapura Sub Division

Sl No.	Description	No.	L	B1	B2.	Av.,B	D	Qty	Rate / Unit	Amount
	Measurements Recarded on :	24.06.2021								
15	Road Marking with Hot Applied Thermoplastic Compound with Reflectrising Glass Beads on Bituminous Surface:- Providing and laying of hot applied thermoplastic compound 2.5 mm thick including reflectorising glass beads at 250 gms per sqm area, thickness of 2.5 mm is exclusive of surface applied glass beads as per IRC:35. The finished surface to be level, uniform and free from streaks and holes complete as per specifications.								Sqm	
	HMT Layout 3rd Block 9th Main									
	From Durga Temple Road to 6th Cross	2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	18.00			0.10		3.60		
	From 6th Cross to Sommanna Garden Main R									
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	15.00			0.10		3.00		
		2	14.00			0.10		2.80		
		2	6.00			0.10		1.20		
					Total Qty =			76.60		
					Qty Limited to =			76.60	414.63	31761.00
	Sub Total									3255867.00
	GST @ 12%									390704.00
									Total	3646571.00

Assistant Engineer
Ward No. 09

Assistant Executive Engineer
Vidayranyapura Sub Division